

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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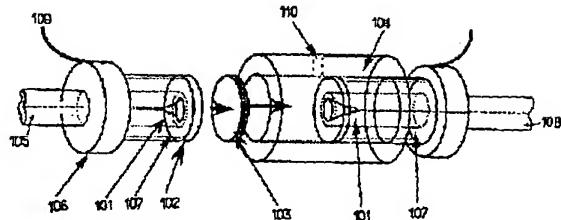
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APPLICANT : NIPPON TELEGR & TELEPH CORP  
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TITLE : VARIABLE LIGHT ATTENUATOR AND  
ITS PRODUCTION



ABSTRACT : PROBLEM TO BE SOLVED: To provide a variable light attenuator capable of lessening the restriction in element formation and prolonging the life thereof by using high-polymer dispersion type liquid crystals.

SOLUTION: This variable light attenuator has a high-polymer dispersion type liquid crystal layer 103 formed by dispersing liquid crystal grains into a high polymer, an electrode 102 disposed across this high-polymer dispersion type liquid crystal layer and parts 101 which consists of a core and clad and confine and propagate light. The transmittance of the high-polymer dispersion type liquid crystal layer is changed by impressing voltage on the electrode. The parts for propagating the light are expanded in the core at the front end on the side facing the high-polymer dispersion type liquid crystal layer. The electrode is a transparent electrode formed at the front end or flank part on the side facing the high-polymer dispersion type liquid crystal layer of the parts for propagating the light.

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